DebateLab Tools for e-Journalism and Informed Citizenship

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1. High-level Problem Description

- The Web is transforming rapidly from a Web of information to a Web of Opinions
- People upload their viewpoints, ratings, and comments on any conceivable topic, via blogs, social media, websites, etc.
- The plethora of opinions flooding the Web are not uploaded as machine-interpretable data
- It is difficult to identify arguments related to a certain topic, to evaluate them, or assess them based on objective and subjective criteria

2. Contributions

DebateLab aims

a. to conduct research towards the required theoretical infrastructure for representing, mining and reasoning with online arguments, and

b. to develop a suite of tools for the e-journalism domain, which will enhance current newsroom processes, and will also have impact on interested users, by supporting informed citizenship

Our ultimate, long-term goal is to pave the way for a new Web paradigm, a modern agora, where arguments and human deliberation can be amenable to machine-interpretable representation and algorithmic processing

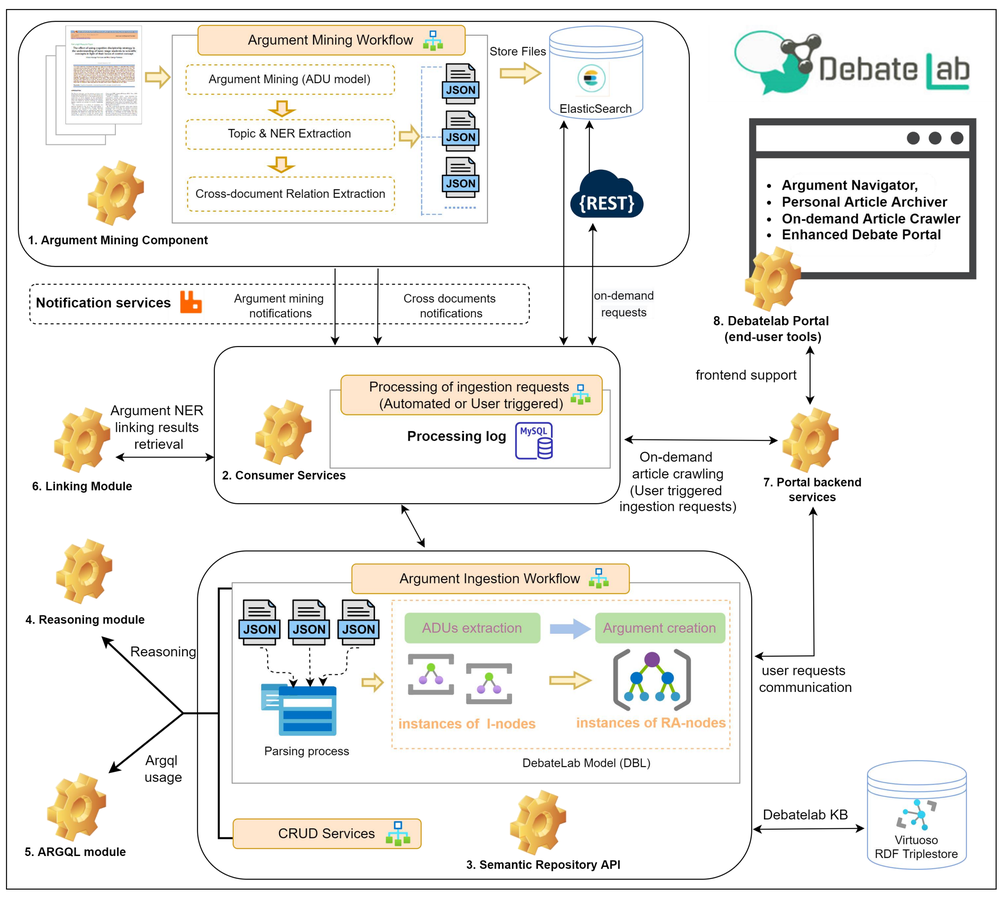
3. Fields of Research

- Argument Mining
- Computational Argumentation
- Information Retrieval
- Semantic Web
- Linked Open Data
- Natural Language Processing

4. Domain of Application

- e-Journalism services and newsroom processes
- Enhance the capabilities of journalists and readers alike
- Offer tools to support users in identifying, assessing and exploring arguments to form opinions on critical matters

5. The Process and Components



Workflow

- Identification of arguments from news agencies on the Web.
- Processing and ingestion of the information in the DebateLab database, in a structured form.
- Enrichment of data with links to external sources (e.g., DBpedia)
- Quantitative evaluation of arguments
- Arguments search and retrieval from the database

Main Components

Argument Mining Component
- Detecting arguments

Ingestion Process
- Processing and structuring data

Linking Module
- Enriching data with relevant sources

Reasoning Module
- Characterizing arguments

ArgQL Module
- Querying arguments

6. Argument Evaluation

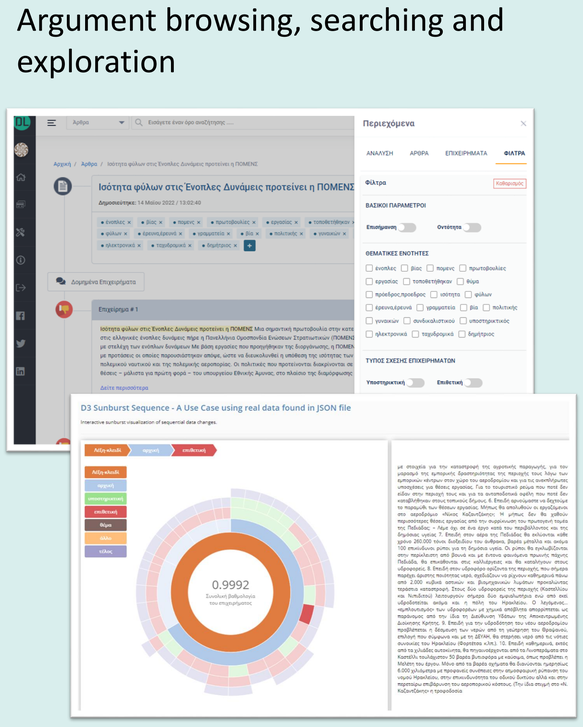
- The strength of each argument is assessed in terms of its acceptance and its quality score
- For each score, we take into consideration a number of dimensions, such as its popularity, topic relevance, credibility
- Users affect these scores directly (through votes) or indirectly, based on the interplay of supporting or attacking arguments

Dimension	**Acceptance** Do you agree with what the argument is saying?	**Quality** Does the argument help shape an opinion? Is it comprehensive?
Mining	-	Base Score
Popularity	Base Score	Base Score
Informativeness	-	Base Score and Votes
Topic Relevance	-	Base Score and Votes
Longlastingness	Base Score	-
Credibility (Validity)	Base Score, Votes and Arguments	-

7. Tools

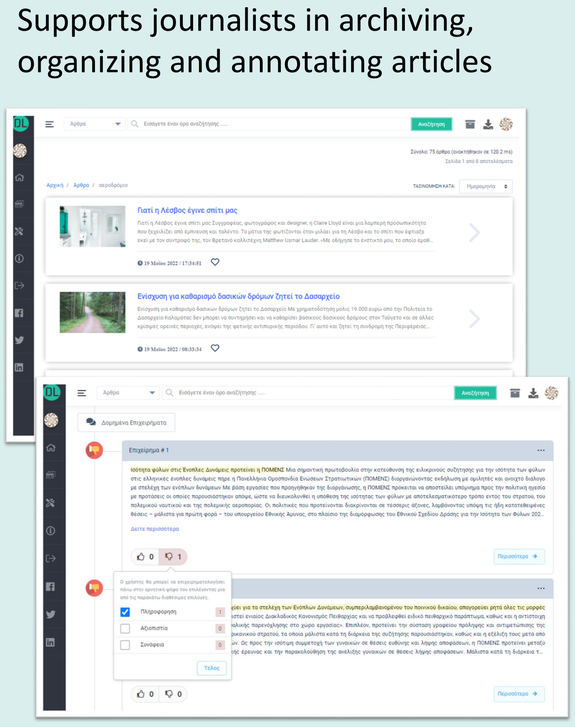
A. Argument Navigator

Argument browsing, searching and exploration



B. Personal Article Archiver

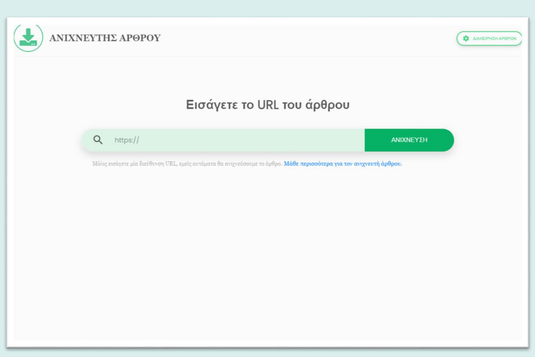
Supports journalists in archiving, organizing and annotating articles



C. On-Demand Article Crawler

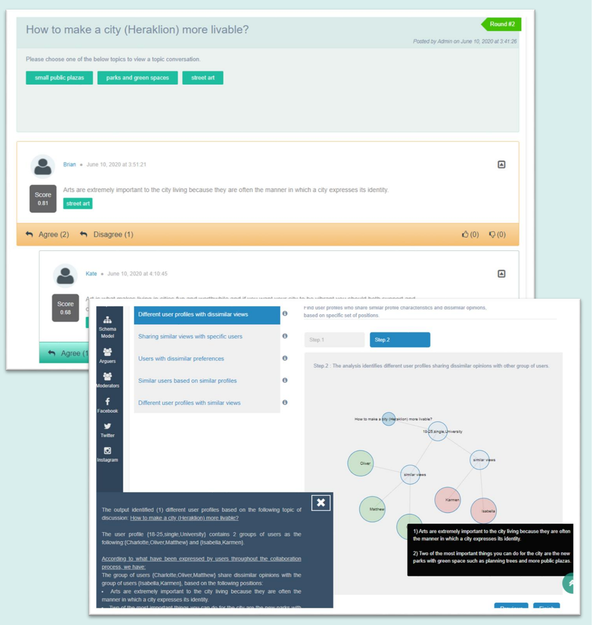
Community-driven support for the annotation of articles

Enables the user to provide additional information (metadata)



D. Enhanced Debate Portal

Structured dialogues, coupled with opinion-related statistics



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